*What is new in 2013?**

Latent iron deficiency in utero is associated with abnormal auditory neural myelination in 35 weeks gestational age infants

Amin SB, Orlando M, Wang H.

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Iron is essential for brain development, and iron deficiency during the fetal and postnatal periods of brain development affects multiple developmental processes, including myelination, dendritic growth, synaptic function, monoamine metabolism, and energy metabolism. To meet iron requirements for brain development during the perinatal period, iron is actively transported across the placenta, and substantial iron accretion occurs during the last trimester of pregnancy. However, pregnancy-induced hypertension, intrauterine growth restriction, maternal iron deficiency, and maternal diabetes mellitus negatively affect fetal iron status. Auditory brainstem evoked response (ABR), a noninvasive neurophysiological assessment tool, has been widely used to evaluate auditory neural myelination as a function of iron status in older infants and children. Published by Journal of Pediatrics Sanjiv B. Amin *et. al* showed that in utero latent iron deficiency is associated with abnormal auditory neural myelination at birth in infants born at ≥35 weeks gestational age.

Ibuprofen, paracetamol, and steam for patients with respiratory tract infections in primary care: pragmatic randomised factorial trial

Little P. et. al.

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Acute respiratory tract infections are the commenest acute condition managed in primary care, and control of symptoms is central for patients and parents of the children. To evaluate the strategies for advice on analgesia and steam inhalation for respiratory tract infections, Little *et al.* designed a randomised controlled trial. 889 patients aged 3 with acute respiratory tract infections were enrolled in the study. They examined the difference in the effectiveness between three different antipyretic regimens: ibuprofen, paracetamol, and combination of ibuprofen and paracetamol; whether regular antipyretic dosing gives significantly better control of symptoms and temperature as required dosing; and whether regular inhalation with steam improves symptom control. Primary outcome was symptom control, secondary outcomes were side effects, mean morning and evening temperature, antibiotic use, return visit with new or worsening symptoms or complications of intervention. In this study patients didn't gain benefit from advice to use ibuprofen alone or combination of ibuprofen and paracetamol nor advice to use regular analgesia or steam inhalation. They stated that patients with chest infections got more symptomatic relief from ibuprofen alone but this must be balanced against possible modest harms that most of them were not serious.

Efficacy and safety of fluticasone furoate/vilanterol compared with fluticasone propionate/salmeterol combination in adult and adolescent patients with persistent asthma

Woodcock A. et al.

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For patients with asthma who remain uncontrolled despite inhaled corticosteroid (ICS) therapy, a long-acting inhaled β2-agonist (LABA) may be added. Combination therapy improves symptoms, reduces severe exacerbation rate and achieves better asthma control in more patients than ICS monotherapy. However, poor adherence to bid therapy may account for poor asthma control in some patients. For these patients, once-daily therapy could offer them greater convenience, thereby improving adherence.

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Vilanterol (VI) is a LABA with inherent 24-h activity in development as a once-daily treatment in combination with the novel ICS fluticasone furoate (FF) for asthma and COPD. A VI dose-ranging study with concurrent ICS, also in persistent asthma, showed that the 25 μg dose of VI administered once daily over 4 weeks provided the most beneficial therapeutic ratio.

Woodcock *et al.* designed a randomized, double-blind, double-dummy, parallel group study including 806 patients.The main aim of the current study was to compare the efficacy of FF/VI 100/25 μg administered once daily in the evening with fluticasone propionate(FP)/salmeterol (SAL) 250/50μg administered bid over a 24-week treatment period in patients aged ≥12 years with persistent asthma uncontrolled on medium-dose of ICS. The dose of FP/SAL selected was considered suitable for the patient population to be studied.

The primary effi cacy measure was 0- to 24-h serial weighted mean (wm) FEV1after 24 weeks of treatment. Secondaryend points were individual serial FEV 1 assessments at week 24, time to onset of bronchodilator effect (the time point when FEV 1 first exceeded the 12% and 200-mL increase over baseline at randomization visit only, 0- to 4-h serial wmFEV1, postdose at the randomization visit and at week 24, percentage ofpatients experiencing a ≥12% and ≥200-mL increase from baseline in FEV 1 at 12 and 24 h at week 24, and change from baseline in clinic visit trough (prebronchodilator and predose) FEV 1 at week 24. Other efficacy end points were scores on the Asthma Quality of Life +12 Questionnaire (AQLQ +12), the Asthma Control Test, and the European Quality of Life-5 Dimensions (EQ-5D) test, and unscheduled health-care resource utilization. asked to complete questionnaires at baseline and end of treatment.

In the study Woodcock et al found no statisticaly significant difference between the groups for the primary efficacy measure of 0- to 24-h serial weighted mean (wm) FEV1 after 24 weeks of treatment or for any of the secondary efficacy mesures., and also no differences in Asthma Control Test scores or in measures of quality of life (AQLQ +12 and EQ-5D) were shown in the present study.

In conclusion, there was no difference in efficacy or safety between FF/VI 100/25 μg administered once daily in the evening and FP/SAL 250/50 μg administered bid.